

CLAIMS:

1 1. An air flow structure for enclosing a coil of an air
2 treatment system, the air flow structure comprising
3 a container with at least two openings for air flow
4 therethrough,
5 the container having an interior surface,
6 the interior surface having ultraviolet-resistant
7 material thereon.

1 2. The air flow structure of Claim 1 wherein the container
2 includes structural members made of material bound together with
3 binder material, said binder material degradable by ultraviolet
4 light.

1 3. The air flow structure of Claim 1 wherein the container
2 is a coil enclosure.

1 4. The air flow structure of Claim 1 wherein the container
2 is a duct for transmitting air.

1 5. The air flow structure of Claim 1 further comprising
2 coil apparatus within the container for exchanging
3 heat between the coil apparatus and air flowing through the
4 coil apparatus.

1 6. The air flow structure of Claim 5 wherein the coil
2 apparatus has at least a first part and a second part, the air flow
3 structure further comprising

4 first expansion valve apparatus for selectively
5 controlling flow of heat exchange fluid through the first part
6 of the coil apparatus, and

7 second expansion valve apparatus for selectively
8 controlling flow of heat exchange fluid through a second part
9 of the coil apparatus.

1 7. The air flow structure of Claim 1 further comprising
2 a light source within the container for providing
3 ultraviolet light to air flowing therethrough.

1 8. The air flow structure of Claim 1 wherein the ultraviolet
2 resistant material comprises laminate material.

1 9. The air flow structure of Claim 1 wherein the container
2 is made of material from the group consisting of metal, plastic,
3 wood, fiberglass, and fiberboard.

1 10. The air flow structure of Claim 1 wherein the container
2 has an interior surface and substantially all of the interior
3 surface is protected by the ultraviolet-resistant material.

1 11. The air flow structure of Claim 1 wherein the container
2 is made of structural material with the interior surface and with
3 an outer surface, the outer surface having a layer of vapor barrier
4 material thereon.

1 12. An air flow structure for enclosing a coil of an air
2 treatment system, the air flow structure comprising

3 a container with at least two openings for air flow
4 therethrough,

5 the container having an interior surface,

6 the interior surface having ultraviolet-resistant
7 material thereon,

8 wherein the container includes structural members
9 made of material bound together with binder material, said
10 binder material degradable by ultraviolet light,

11 wherein the container is a coil enclosure,

12 coil apparatus within the container for exchanging
13 heat between the coil apparatus and air flowing through the
14 coil apparatus, and

15 a light source within the container for providing
16 ultraviolet light to air flowing therethrough.

1 13. The air flow structure of Claim 12 further comprising
2 coil apparatus within the container for exchanging
3 heat between the coil apparatus and air flowing through the
4 coil apparatus.

1 14. The air flow structure of Claim 12 further comprising
2 first expansion valve apparatus for selectively
3 controlling flow of heat exchange fluid through the first part
4 of the coil apparatus, and

5 second expansion valve apparatus for selectively
6 controlling flow of heat exchange fluid through a second part
7 of the coil apparatus.

1 15. A method for treating air, the method comprising
2 flowing air through an air flow structure, the air
3 flow structure comprising a container with at least two
4 openings for air flow therethrough, the container having an
5 interior surface, and the interior surface having ultraviolet-
6 resistant material thereon.

1 16. The method of Claim 15 wherein the air flow structure
2 includes coil apparatus within the container for exchanging heat
3 between the coil apparatus and air flowing through the coil
4 apparatus, first expansion valve apparatus for selectively
5 controlling flow of heat exchange fluid through the first part of
6 the coil apparatus, and second expansion valve apparatus for
7 selectively controlling flow of heat exchange fluid through a
8 second part of the coil apparatus, the method further comprising
9 selectively controlling the flow of heat exchange
10 fluid through the coil apparatus with the first expansion
11 valve apparatus and the second expansion valve apparatus.

1 17. The method of Claim 15 wherein the air flow structure
2 includes coil apparatus within the container for exchanging heat
3 between the coil apparatus and air flowing through the coil
4 apparatus, first expansion valve apparatus for selectively
5 controlling flow of heat exchange fluid through the first part of
6 the coil apparatus, and second expansion valve apparatus for
7 selectively controlling flow of heat exchange fluid through a
8 second part of the coil apparatus, the method further comprising
9 selectively controlling the flow of heat exchange
10 fluid through the coil apparatus with the first expansion
11 valve apparatus and the second expansion valve apparatus.

1 18. Coil apparatus for an air treatment system, the coil
2 apparatus comprising
3 the coil apparatus positionable within a container

4 for exchanging heat between the coil apparatus and air flowing
5 through the coil apparatus,

6 the coil apparatus having at least a first part and
7 a second part,

8 first expansion valve apparatus for selectively
9 controlling flow of heat exchange fluid through the first
10 part of the coil apparatus, and

11 second expansion valve apparatus for
12 selectively controlling flow of heat exchange fluid
13 through a second part of the coil apparatus.